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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/802,049	ELLIS, FRAMPTON E.	
	Examiner	Art Unit	
	Oscar A. Louie	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :03/04; 05/04; 08/04; 12/12/06; 12/18/06; 03/07.

DETAILED ACTION

This first non-final action is in response to the original filing of 03/17/2004. Claims 1-80 are pending and have been considered as follows.

Claim Objections

1. Claim 54 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

- Claim 54 recites the limitation, "said first memory hardware component is a flash memory device," however, Claim 53 also recites the exact same limitation. Both Claims 53 and 54 depend from Claim 50 which depends from independent Claim 1.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 4, 76, & 77 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- Claims 4, 76, & 77 recite similar limitations regarding, "said microchip substantially includes a personal computer on said microchip" which is inoperable since it is not defined in the specification as to how one of ordinary skill in the art would place a personal computer on top of a microchip.
- The examiner notes that the claim language for these claims in light of the applicant's specification appears to have meant to be written with limitations which would clearly disclose a microchip as being equivalent to a microprocessor; although a microprocessor may consist of many microchips, where the microprocessor and/or microchip(s) are in the personal computer. The current claim language would be confusing to one of ordinary skill in the art as it appears to teach the placement of a physical object (i.e. a personal computer) larger than a microchip on top of the microchip rendering these claims inoperable.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The term "substantially" in claims 4, 6, 7, 25, 42, 76, & 77 is a relative term which renders the claims indefinite. The term "substantially" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

6. The term "capable" in claim 11 is a relative term which renders the claim indefinite. The term "capable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

- The examiner notes that terms such as, "capable, operable, operative, etc" are not definite and may be construed as rendering the limitation(s) of the invention "incapable, inoperable, etc." It is recommended that the term "capable" be replaced with a more definite term (i.e. "configured, etc") or omitted.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 & 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson et al. (US-5838542-A).

Claim 1:

Nelson et al. disclose an apparatus comprising,

- "a microchip including a personal computer with a general purpose microprocessor on said microchip" (i.e. "Over the years, for compatibility and other reasons, a number of popular system chassis have been "adopted" by the microprocessor based computer system manufacturers, especially in the desktop sector, as de-facto form factors") [column 1 lines 53-55];
- "a Faraday Cage surrounding at least a portion of said microchip" (i.e. "the fourth plurality of fastening features of the metallic plate to allow the metallic plate and the back cover to physically and electro-magnetically form a Faraday cage enclosing the processor card to shield off electro-magnetic interference emissions from the processor") [column 2 lines 22-23].

Claim 3:

Nelson et al. disclose an apparatus, as in Claim 1 above, further comprising,

- "said microchip includes a special purpose microprocessor" (i.e. "Over the years, for compatibility and other reasons, a number of popular system chassis have been "adopted" by the microprocessor based computer system manufacturers, especially in the desktop sector, as de-facto form factors") [column 1 lines 53-55].

Claim 4:

Nelson et al. disclose an apparatus, as in Claim 1 above, further comprising,

- "said microchip substantially includes a personal computer on said microchip" (i.e. "Over the years, for compatibility and other reasons, a number of popular system chassis have been "adopted" by the microprocessor based computer system manufacturers, especially in the desktop sector, as de-facto form factors") [column 1 lines 53-55].

Claim 5:

Nelson et al. disclose an apparatus, as in Claim 1 above, further comprising,

- "said microchip is at least partly surrounded by at least one Faraday Cage" (i.e. "the fourth plurality of fastening features of the metallic plate to allow the metallic plate and the back cover to physically and electro-magnetically form a Faraday cage enclosing the processor card to shield off electro-magnetic interference emissions from the processor") [column 2 lines 22-23].

Claim 6:

Nelson et al. disclose an apparatus, as in Claim 1 above, further comprising,

- "said microchip is substantially surrounded by at least one Faraday Cage" (i.e. "the fourth plurality of fastening features of the metallic plate to allow the metallic plate and the back cover to physically and electro-magnetically form a Faraday cage enclosing the processor card to shield off electro-magnetic interference emissions from the processor") [column 2 lines 22-23].

Claim 7:

Nelson et al. disclose an apparatus, as in Claim 1 above, further comprising,

- "said microchip is substantially surrounded by more than one Faraday Cage" (i.e. "the fourth plurality of fastening features of the metallic plate to allow the metallic plate and the back cover to physically and electro-magnetically form a Faraday cage enclosing the processor card to shield off electro-magnetic interference emissions from the processor") [column 2 lines 22-23].

9. Claim 80 is rejected under 35 U.S.C. 102(b) as being anticipated by Palmer et al. (US-5861817-A).

Claim 80:

Palmer et al. disclose an apparatus comprising,

- "a microchip including a general purpose microprocessor and one or more photovoltaic cells" [Fig 4 illustrates a microprocessor with photovoltaic cells].

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of Purtell et al. (US-6950947-B1).

Claim 2:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "an operating system associated with said apparatus includes a number of independent components, each component having its own firewall"

however, Purtell et al. do disclose,

- [Fig 2 illustrates several clients and their components each having their own firewall];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "an operating system associated with said apparatus includes a number of independent components, each component having its own firewall," in the invention as disclosed by Nelson et al. since it is implied from Fig 2 that a plurality of client devices (i.e. components) may each have their own firewall.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of Russell et al. (US-5627879-A).

Claim 8:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said microchip is configured for a network connection including wave division multiplexing or dense wave division multiplexing"

however, Russell et al. do disclose,

- "Other modifications to the embodiments of FIGS. 17 through 35 include wave division multiplexing so that the fiber pairs may be replace with a single fiber" [column 21 lines 30-31];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said microchip is configured for a network connection including wave division multiplexing or dense wave division multiplexing," in the invention as disclosed by Nelson et al. for the purposes of "replacing fiber pairs with a single fiber" [column 21 line 31].

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of Boulos et al. (US-6208634-B1).

Claim 9:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said microchip is configured for a wireless network connection including CDMA (code division multiple access) or wideband CDMA"

however, Boulos et al. do disclose,

- "a method of initiating calls between a mobile station and a base station in a CDMA system... a microprocessor associated with the mobile station in electrical communication with the receiver" [column 1 lines 55-56 & column 2 lines 47-49];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said microchip is configured for a wireless network connection including CDMA (code division multiple access) or wideband CDMA," in the invention as disclosed by Nelson et al. for the purposes of wireless telecommunications over a common mobile communications system standard.

14. Claims 10-17, 21-25, 31-44, 50-62, 65-67, 69-71, & 73-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of McKelvey (US-5896499-A).

Claim 10:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said apparatus includes a plurality of inner firewalls configured to operate within a personal computer, which is configured to operate in a network of computers"
- "said personal computer including at least two microprocessors"
- "said plurality of firewalls configured to deny access to at least a first microprocessor of said personal computer by another computer through a network connection with said personal computer during a shared operation"

- "said plurality of firewalls configured to allow access to at least a second microprocessor of said personal computer by said another computer through said network connection with said personal computer during said shared operation"

however, McKelvey do disclose,

- "an expansion board is coupled to the system bus with a secondary embedded security processor dedicated to network communications security tasks" [column 5 lines 38-41];
- [Fig 3 illustrates a computer with two microprocessors];
- "to communicate only with main processor 110 with appropriate communication traffic being forwarded by main processor 110" [column 6 lines 31-32];
- "Main processor 110 may permit selected elements to communicate with other elements directly or may require them" [column 6 lines 30-31];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said apparatus includes a plurality of inner firewalls configured to operate within a personal computer, which is configured to operate in a network of computers" and "said personal computer including at least two microprocessors" and "said plurality of firewalls configured to deny access to at least a first microprocessor of said personal computer by another computer through a network connection with said personal computer during a shared operation" and "said plurality of firewalls configured to allow access to at least a second microprocessor of said personal computer by said another computer through said network connection with said personal computer during said shared operation," in the invention as disclosed by Nelson et al. since a personal computer with any number of microprocessors may be used as a firewall which denies or allows access to resources.

Claim 50:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said apparatus includes a plurality of inner firewalls configured to operate within a personal computer, which is configured to operate in a network of computers"
- "said personal computer including at least two microprocessors and at least two memory hardware components"
- "said plurality of firewalls configured to deny access to at least a first microprocessor and at least a first memory hardware component of said personal computer by another computer through a network connection with said personal computer during a shared operation"
- "said plurality of firewalls configured to allow access to at least a second microprocessor and at least a second memory hardware component of said personal computer by said another computer through said network connection with said personal computer during said shared operation"

however, McKelvey do disclose,

- "an expansion board is coupled to the system bus with a secondary embedded security processor dedicated to network communications security tasks" [column 5 lines 38-41];
- [Fig 3 illustrates a computer with two microprocessors and two memory];
- "to communicate only with main processor 110 with appropriate communication traffic being forwarded by main processor 110" [column 6 lines 31-32];
- "Main processor 110 may permit selected elements to communicate with other elements directly or may require them" [column 6 lines 30-31];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said apparatus includes a plurality of inner firewalls configured to operate within a personal computer, which is configured to operate in a network of computers" and "said personal computer including at least two microprocessors and at least two memory hardware components" and "said plurality of firewalls configured to deny access to at least a first microprocessor and at least a first memory hardware component of said personal computer by another computer through a network connection with said personal computer during a shared operation" and "said plurality of firewalls configured to allow access to at least a second microprocessor and at least a second memory hardware component of said personal computer by said another computer through said network connection with said personal computer during said shared operation," in the invention as disclosed by Nelson et al. since a personal computer with any number of microprocessors and memory may be used as a firewall which denies or allows access to resources.

Claim 73:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said apparatus includes a plurality of inner firewalls configured to operate within a personal computer, which is configured to operate in a network of computers"
- "said personal computer including at least one microprocessor and at least two memory hardware component"
- "said plurality of firewalls configured to deny access to at least a first memory hardware component of said personal computer by another computer through a network connection with said personal computer during a shared operation"

- "said plurality of firewalls configured to allow access to at least a second memory hardware component of said personal computer by said another computer through said network connection with said personal computer during said shared operation"

however, McKelvey do disclose,

- "an expansion board is coupled to the system bus with a secondary embedded security processor dedicated to network communications security tasks" [column 5 lines 38-41];
- [Fig 3 illustrates a computer with two microprocessors and two memory];
- "to communicate only with main processor 110 with appropriate communication traffic being forwarded by main processor 110" [column 6 lines 31-32];
- "Main processor 110 may permit selected elements to communicate with other elements directly or may require them" [column 6 lines 30-31];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said apparatus includes a plurality of inner firewalls configured to operate within a personal computer, which is configured to operate in a network of computers" and "said personal computer including at least one microprocessor and at least two memory hardware component" and "said plurality of firewalls configured to deny access to at least a first memory hardware component of said personal computer by another computer through a network connection with said personal computer during a shared operation" and "said plurality of firewalls configured to allow access to at least a second memory hardware component of said

personal computer by said another computer through said network connection with said personal computer during said shared operation," in the invention as disclosed by Nelson et al. since a personal computer with any number of microprocessors and memory may be used as a firewall which denies or allows access to resources.

Claim 74:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said personal computer has a controller component that controls said microprocessor of said personal computer"

however, McKelvey do disclose,

- "All CPUs are capable of suitably executing the programs contained within main memory 130 and acting in response to those programs or other activities that may occur in system 100" [column 6 lines 54-57];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer has a controller component that controls said microprocessor of said personal computer," in the invention as disclosed by Nelson et al. for the purposes of having the microprocessor execute programs and act in response to other activities in the system.

Claim 75:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said personal computer includes a plurality of microprocessors"

however, McKelvey do disclose,

- [Fig 3 illustrates two microprocessors];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer includes a plurality of microprocessors," in the invention as disclosed by Nelson et al. for the purposes of having one microprocessor act as a main processor and the other for as a security processor.

Claim 76:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said personal computer is substantially contained in a respective single microchip"

however, McKelvey do disclose,

- [Fig 3 illustrates a computer with a microprocessor];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer is substantially contained in a respective single microchip," in the invention as disclosed by Nelson et al. for the purposes of having a computer with a main processor.

Claim 77:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 76 above, further comprising,

- "said personal computer is substantially contained in a single respective microchip having a plurality of microprocessors" [Fig 3 illustrates a computer with two microprocessors].

Claim 78:

Nelson et al. disclose an apparatus, as in Claim 1 above, but do not disclose,

- "said personal computer is an appliance with a microprocessor"

however, McKelvey do disclose,

- [Fig 3 illustrates a computer with a microprocessor];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer is an appliance with a microprocessor," in the invention as disclosed by Nelson et al. for the purposes of having a computer with a main processor.

Claim 79:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 78 above, further comprising,

- "said appliance includes one of a handheld personal digital assistant, a telephone, a pager, a television, a game, a videotape player/recorder, a video camera, a compact disk (CD) player/recorder, a digital video disk (DVD) player/recorder, a radio, a camera, a printer, a fax machine, and an automobile" (i.e. "personal computer (PC)") [column 1 line 30].

Claim 11:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "a configuration of said firewall is capable of being changed by a user of said personal computer or by an authorized network administrator" (i.e. "User authentication program 140, initial firewall configuration 150, and firewall monitoring program 160 are all examples of firewall control programs and are executed by main processor 110 to control the activity of embedded security processor 173") [column 10 lines 46-50].

Claim 12:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 11 above, further comprising,

- "said change in a firewall configuration is made, at least in part, by using field-programmable gate arrays (FPGA's)" (i.e. "The firewall configuration data is similarly stored in a protected area of DASD 180. This means that the security programs and firewall configuration can only be changed or updated by main processor 110") [column 10 lines 34-37].

Claim 13:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 11 above, further comprising,

- "said change in a firewall configuration involves a motherboard" (i.e. "System bus 105 provides a communication link between main processor 110 and embedded security processor 173") [column 9 lines 32-33].

Claim 14:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 11 above, further comprising,

- "said change in a firewall configuration involves a manual switch" (i.e. "Expansion board 170 provides the security features for system 100") [column 7 lines 19-20].

Claim 15:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said firewall includes a hardware component" (i.e. "Expansion board 170 provides the security features for system 100") [column 7 lines 19-20].

Claim 16:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said firewall includes a software component" (i.e. "expansion board 170 is an after-market hardware/software solution") [column 7 line 23].

Claim 17:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said firewall includes a firmware component" (i.e. "expansion board 170 is an after-market hardware/software solution") [column 7 line 23].

Claim 21:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said firewall denies access at least temporarily to a microprocessor of said personal computer by said another computer through said network connection during said shared operation" (i.e. "to communicate only with main processor 110 with appropriate communication traffic being forwarded by main processor 110") [column 6 lines 31-32].

Claim 22:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said firewall allows access at least temporarily to a microprocessor of said personal computer by said another computer through said network connection during said shared operation" (i.e. "Main processor 110 may permit selected elements to communicate with other elements directly or may require them") [column 6 lines 30-31].

Claim 23:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said network of computers includes an Internet" (i.e. "The Internet") [column 1 lines 41-44].

Claim 24:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said network of computers includes a World Wide Web" (i.e. "The Internet") [column 1 lines 41-44].

Claim 25:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said network connection includes an optical fiber connection substantially directly to said personal computer" (i.e. "fiber optics") [column 6 line 3].

Claim 31:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said personal computer is configured to communicate with said network through a connection having a minimum speed of data transmission that is greater than a peak data processing speed of said personal computer" (i.e. "fiber optics") [column 6 line 3].

Claim 32:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "at least one microprocessor of said personal computer is configured to communicate with said network through a connection having a minimum speed of data transmission that is greater than a peak data processing speed of said at least one microprocessor" (i.e. "fiber optics") [column 6 line 3].

Claims 33-41:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said personal computer has at least four microprocessors"
- "said personal computer has at least eight microprocessors"
- "said personal computer has at least 16 microprocessors"
- "said personal computer has at least 32 microprocessors"
- "said personal computer has at least 64 microprocessors"
- "said personal computer has at least 128 microprocessors"
- "said personal computer has at least 256 microprocessors"
- "said personal computer has at least 512 microprocessors"
- "said personal computer has at least 1024 microprocessors"
- [Fig 3 illustrates a computer with two microprocessors, however, it is implied that additional expansion boards may be added to increase the number of microprocessors as necessary].

Claim 42:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said firewall is substantially a hardware component" (i.e. "Expansion board 170 provides the security features for system 100") [column 7 lines 19-20].

Claim 43:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, further comprising,

- "said personal computer is configured for a wireless connection" (i.e. "infrared (IR) and other forms of wireless connections") [column 6 lines 3-4].

Claim 44:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 32 above, further comprising,

- "said wireless connection is to said network" (i.e. "infrared (IR) and other forms of wireless connections") [column 6 lines 3-4].

Claim 51:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said firewall is configured to deny access to at least said second memory hardware component of said personal computer by said personal computer during said shared operation" (i.e. "to communicate only with main processor 110 with appropriate communication traffic being forwarded by main processor 110") [column 6 lines 31-32].

Claims 52-55:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said first memory hardware component is a hard drive device";
- "said first memory hardware component is a flash memory device";
- "said second memory hardware component is a random access memory (RAM) device";

(i.e. "Main memory 130 may be any type of memory device or component known to those skilled in the art. This would include Dynamic Random Access Memory (DRAM), Static RAM (SRAM), flash memory, cache memory, etc. While not explicitly shown in FIG. 1, main memory 130 may be a single type of memory component or may be composed of many different types of memory components") [column 6 lines 58-64].

Claims 56-58:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said second memory hardware component is a hard drive device";
- "said second memory hardware component is a read-only compact disk drive (CD-ROM) device";
- "said second memory hardware component is a read-only digital video disk drive (DVD) device";

(i.e. "This would include CD-ROM drives, hard disk drives, optical drives, etc. Floppy disk 190 represents a typical 3.5 inch magnetic media disk known to those skilled in the art") [column 7 lines 1-4].

Claim 59:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said first memory hardware component includes a BIOS" (i.e. "Input/Output (I/O) memory") [column 5 lines 56-57].

Claim 60:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "a user of said personal computer retains preemptive control of at least said second memory hardware component" (i.e. "to communicate only with main processor 110 with appropriate communication traffic being forwarded by main processor 110") [column 6 lines 31-32].

Claim 61:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "a user of said personal computer retains preemptive control of all components of said personal computer" (i.e. "Main processor 110 may permit selected elements to communicate with other elements directly or may require them") [column 6 lines 30-31].

Claim 62:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said personal computer has a plurality of microprocessors" [Fig 3 illustrates a computer with two microprocessors].

Claim 65:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said second memory hardware component is volatile memory" (i.e. "Main memory 130 may be any type of memory device or component known to those skilled in the art. This would include Dynamic Random Access Memory (DRAM), Static RAM (SRAM), flash memory, cache memory, etc. While not explicitly shown in FIG. 1, main memory 130 may be a single type of memory component or may be composed of many different types of memory components") [column 6 lines 58-64].

Claim 66:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said first memory hardware component is non-volatile memory" (i.e. "This would include CD-ROM drives, hard disk drives, optical drives, etc. Floppy disk 190 represents a typical 3.5 inch magnetic media disk known to those skilled in the art") [column 7 lines 1-4].

Claim 67:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 66 above, further comprising,

- "said non-volatile memory is one of a magnetic random access memory (MRAM) or ovonic unified memory microchip" (i.e. "Main memory 130 may be any type of memory device or component known to those skilled in the art. This would include Dynamic Random Access Memory (DRAM), Static RAM (SRAM), flash memory, cache memory,

etc. While not explicitly shown in FIG. 1, main memory 130 may be a single type of memory component or may be composed of many different types of memory components") [column 6 lines 58-64].

Claim 69:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said first memory hardware component is read and write memory" (i.e. "Main memory 130 may be any type of memory device or component known to those skilled in the art. This would include Dynamic Random Access Memory (DRAM), Static RAM (SRAM), flash memory, cache memory, etc. While not explicitly shown in FIG. 1, main memory 130 may be a single type of memory component or may be composed of many different types of memory components") [column 6 lines 58-64].

Claim 70:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said second memory hardware component is read-only memory" (i.e. "Main memory 130 may be any type of memory device or component known to those skilled in the art. This would include Dynamic Random Access Memory (DRAM), Static RAM (SRAM), flash memory, cache memory, etc. While not explicitly shown in FIG. 1, main memory 130 may be a single type of memory component or may be composed of many different types of memory components") [column 6 lines 58-64].

Claim 71:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "any hardware component, software file, or firmware file can have its own inner firewall" (i.e. "Expansion board 170 provides the security features for system 100") [column 7 lines 19-20].

15. Claims 18, 19, 27, 28, 30, & 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of McKelvey (US-5896499-A) and in further view of Bergsten (US-6073209-A).

Claim 18:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "said shared operation is initiated by a user of said personal computer"

however, Bergsten does disclose,

- "operate in peer-to-peer relationships (as opposed to master-slave relationships) with each other when responding to remote access requests" [column 4 lines 51-53];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said shared operation is initiated by a user of said personal computer," in the invention as disclosed by Nelson et al. and McKelvey since peer-to-peer communications involve any user initiating a request.

Claim 19:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "said shared operation is initiated by said another computer"

however, Bergsten does disclose,

- "operate in peer-to-peer relationships (as opposed to master-slave relationships) with each other when responding to remote access requests" [column 4 lines 51-53];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said shared operation is initiated by said another computer," in the invention as disclosed by Nelson et al. and McKelvey since peer-to-peer communications involve any user initiating a request.

Claim 27:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "said personal computer is configured to function as one of a master and a slave in said shared operation"

however, Bergsten does disclose,

- "operate in peer-to-peer relationships (as opposed to master-slave relationships) with each other when responding to remote access requests" [column 4 lines 51-53];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer is configured to function as one of a master and a slave in said shared operation," in the invention as disclosed by Nelson et al. and McKelvey since peer-to-peer communications involve any user initiating a request.

Claim 28:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "said personal computer is configured to be controlled by a remote master controller"

however, Bergsten does disclose,

- "remote access requests" [column 4 line 53];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer is configured to be controlled by a remote master controller," in the invention as disclosed by Nelson et al. and McKelvey since peer-to-peer communications involve any user initiating a request.

Claim 30:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "said another computer is another personal computer connected via a peer-to-peer connection to said personal computer"

however, Bergsten does disclose,

- "operate in peer-to-peer relationships (as opposed to master-slave relationships) with each other when responding to remote access requests" [column 4 lines 51-53];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said another computer is another personal computer connected via a peer-to-peer connection to said personal computer," in the invention as disclosed by Nelson et al. and McKelvey since peer-to-peer communications involve any user initiating a request.

Claim 68:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, but do not disclose,

- "said second memory hardware component duplicates a first memory hardware component"

however, Bergsten does disclose,

- "data mirroring" [column 7 line 31];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said second memory hardware component duplicates a first memory hardware component," in the invention as disclosed by Nelson et al. and McKelvey for the purposes of data back up and integrity.

16. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of McKelvey (US-5896499-A) and in further view of Reneris (US-5784628-A).

Claim 20:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "at least a part of said personal computer is idled by a user of said personal computer"

however, Reneris does disclose,

- "In general, "suspending" a computer system is similar to powering off the computer system (e.g., by turning off the main power switch), except that power to memory is maintained and dynamic RAM (DRAM) is refreshed, leaving the computer system in a "suspended" power state" [column 10 lines 44-49];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "at least a part of said personal computer is idled by a user of said personal computer," in the invention as disclosed by Nelson et al. and McKelvey for the purposes of "leaving the computer system in a "suspended" power state" [column 10 lines 48-49].

17. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of McKelvey (US-5896499-A) and in further view of Russell et al. (US-5627879-A).

Claim 26:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "said personal computer is configured for a dense wave division multiplexing (DWDM) network connection"

however, Russell et al. does disclose,

- "Other modifications to the embodiments of FIGS. 17 through 35 include wave division multiplexing so that the fiber pairs may be replace with a single fiber" [column 21 lines 30-31];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer is configured for a dense wave division multiplexing (DWDM) network connection," in the invention as disclosed by Nelson et al. and McKelvey for the purposes of replacing fiber pairs with a single fiber.

18. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of McKelvey (US-5896499-A) and in further view of Ault et al. (US-5764889-A).

Claim 29:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "said shared operation is one of parallel processing or multitasking"

however, Ault et al. does disclose,

- "Distributed computing systems (in which the work is distributed among a plurality of interconnected machines) are often built on a client/server model" [column 1 lines 11-13];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said shared operation is one of parallel processing or multitasking," in the invention as disclosed by Nelson et al. and McKelvey for the purposes of distributing work.

19. Claims 45-47, 63, 64, & 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of McKelvey (US-5896499-A) and in further view of Purtell et al. (US-6950947-B1).

Claims 45-47:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 10 above, but do not disclose,

- "a part of an operating system associated with said apparatus includes a number of independent components, each component having its own firewall"

- "an application program associated with said apparatus includes a number of independent components, each component having its own firewall"
- "a part of an application program associated with said apparatus includes a number of independent components, each component having its own firewall"

however, Purtell et al. does disclose,

- [Fig 2 illustrates several clients and their components each having their own firewall];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "a part of an operating system associated with said apparatus includes a number of independent components, each component having its own firewall" and "an application program associated with said apparatus includes a number of independent components, each component having its own firewall" and "a part of an application program associated with said apparatus includes a number of independent components, each component having its own firewall," in the invention as disclosed by Nelson et al. and McKelvey since it is implied from Fig 2 that a plurality of client devices (i.e. components) may each have their own firewall.

Claim 63:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, but do not disclose,

- "said personal computer functions as a master in said shared operation"

however, Purtell et al. does disclose,

- "The term "server" is commonly used to describe a computer program that provides services to other computer programs in the same or other computers" [column 3 lines 3-5];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer functions as a master in said shared operation," in the invention as disclosed by Nelson et al. and McKelvey since a computer may be used as a server (i.e. master) to its clients.

Claim 64:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, but do not disclose,

- "said personal computer functions as a slave in said shared operation"

however, Purtell et al. does disclose,

- "The term "client" is commonly used to describe a program or user requesting data in a client/server relationship, and may also be used to describe the physical hardware in which a client program is located. For the purposes of this" [column 2 lines 56-57];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "said personal computer functions as a slave in said shared operation," in the invention as disclosed by Nelson et al. and McKelvey since a computer may be used as a client (i.e. slave) to its server (i.e. master).

Claim 72:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, but do not disclose,

- "at least two of a hardware component, a software file, or a firmware file can be grouped exclusively together inside an inner firewall"

however, Purtell et al. does disclose,

- [Fig 2 illustrates groups of devices behind their own firewall];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "at least two of a hardware component, a software file, or a firmware file can be grouped exclusively together inside an inner firewall," in the invention as disclosed by Nelson et al. and McKelvey for the purposes of providing a firewall for each client.

20. Claims 48 & 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US-5838542-A) in view of McKelvey (US-5896499-A) and in further view of Lapointe et al. (US-5606615-A).

Claim 48:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said network-accessible portion being located outside at least one said inner firewall" [Fig 3 illustrates the location of the network being connected from the outside of the firewall];

but their combination do not disclose,

- "power is interrupted to a network-accessible portion of a volatile memory of said personal computer to erase all files in said network-accessible portion"

however, Lapointe et al. do disclose,

- "a command being issued to a Power Off Switch 106 to erase RAM 102" [column 4 lines 58-59];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "power is interrupted to a network-accessible portion of a volatile memory of said personal computer to erase all files in said network-accessible portion," in the invention as disclosed by Nelson et al. and McKelvey for the purposes of erasing information in memory.

Claim 49:

Nelson et al. and McKelvey disclose an apparatus, as in Claim 50 above, further comprising,

- "said network-accessible portion being located outside at least one said inner firewall" [Fig 3 illustrates the location of the network being connected from the outside of the firewall];

but their combination do not disclose,

- "all files are overwritten in a network-accessible portion of a non-volatile memory of said personal computer to erase said files"

however, Lapointe et al. do disclose,

- "Further security against data theft is achieved through the use of Sensors, e.g., Photosensors, which trigger the erase of memory" [column 3 lines 29-31];

Therefore, it would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to include, "all files are overwritten in a network-accessible portion of a non-volatile memory of said personal computer to erase said files," in the invention as disclosed by Nelson et al. and McKelvey for the purposes of erasing information in memory.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Oscar Louie whose telephone number is 571-270-1684. The examiner can normally be reached Monday through Thursday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser Moazzami, can be reached at 571-272-4195. The fax phone number for Formal or Official faxes to Technology Center 2100 is 571-273-8300.

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OAL
09/12/2007

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